



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
30.08.2017 Bulletin 2017/35

(51) Int Cl.:
F16C 19/36 (2006.01) **F16C 33/36** (2006.01)
F16C 33/58 (2006.01) **F16C 23/08** (2006.01)

(43) Date of publication A2:
21.02.2007 Bulletin 2007/08

(21) Application number: **06017071.9**

(22) Date of filing: **16.08.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated Extension States:
AL BA HR MK RS

(30) Priority: **18.08.2005 JP 2005237554**

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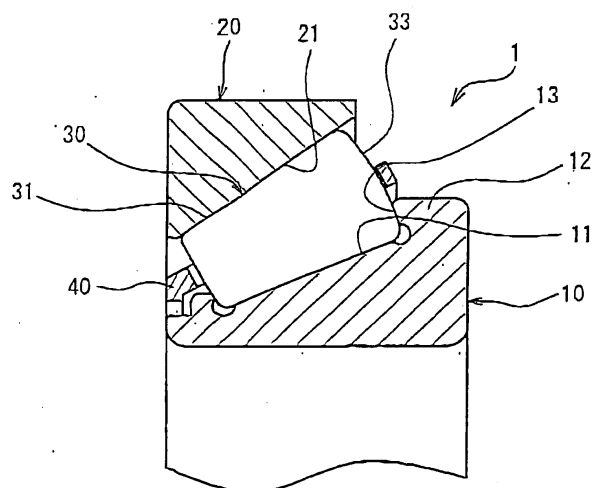
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(54) **Tapered roller bearing and automotive pinion shaft supporting apparatus utilizing same tapered roller bearing**

(57) A tapered roller bearing according to the invention is such that when an arithmetical mean roughness as a surface roughness of a large end face of a tapered roller is σ_1 and an arithmetical mean roughness as a surface roughness of a large rib surface of an inner ring is σ_2 , σ_1 is $0.04\mu\text{m}$ or larger, and a composite roughness that is expressed by a square root of a sum of a squared value of σ_1 and a squared value of σ_2 is $0.17\mu\text{m}$ or smaller. Raceway surfaces of an outer ring and the inner ring and a rolling contact surface of the tapered roller are crowned, and a total crowning amount is set to $50\mu\text{m}$ or larger, an outer ring crowning rate is set to 40% or larger, and a roller crowning rate is set to 20% or smaller.

Fig.1





EUROPEAN SEARCH REPORT

 Application Number
 EP 06 01 7071

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 20 July 2017	Examiner De Jongh, Cornelis
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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